

THE
ONTARIO WATER RESOURCES
COMMISSION
WATER POLLUTION SURVEY
of the
TOWN OF HARROW
COUNTY OF ESSEX

July, 1965

MOE
HAR
WAT
ATBC

c.1
a aa

Copyright Provisions and Restrictions on Copying:

This Ontario Ministry of the Environment work is protected by Crown copyright (unless otherwise indicated), which is held by the Queen's Printer for Ontario. It may be reproduced for non-commercial purposes if credit is given and Crown copyright is acknowledged.

It may not be reproduced, in all or in part, for any commercial purpose except under a licence from the Queen's Printer for Ontario.

For information on reproducing Government of Ontario works, please contact ServiceOntario Publications at copyright@ontario.ca



Environment Ontario

Laboratory Library
125 Resources Rd.

Etobicoke, Ontario M9P 3V6
Canada

R E P O R T

on a

WATER POLLUTION SURVEY

of the

TOWN OF HARROW

County of Essex

July 6, 1965

Division of Sanitary Engineering

MOE
HAR
WAT
ATBC

atbc

REPORT

ONTARIO WATER RESOURCES COMMISSION

A water pollution survey was conducted in the Town of Harrow on July 6, 1965.

Information pertinent to the survey was provided by Mr.B.E. Baltzer, Clerk-Treasurer. Mr.C. Hawkins, Public Works Foreman, assisted in the sampling programme.

GENERAL

The Town of Harrow, with a 1964 assessed population of 1,752 (1965 Municipal Directory) is located in the south-western section of the County of Essex, approximately five miles north of Lake Erie on Highway 18.

General drainage for the town and area is provided by the upper reaches of the Cedar Creek watercourse, which in turn discharges into Lake Erie. Local drainage is provided by three municipal surface-water drains, namely (1) Phillip Ferriss Drain, (2) Shepley Drain (3) King Street Drain. Each of these drains discharge into the municipal Richmond Drain which constitutes a major portion of the head waters of Cedar Creek.

Septic tank systems are used in general for the treatment of sanitary sewage. Adverse absorption qualities of soil in some sections tend to result in the unsatisfactory operation of field tile disposal beds. This condition results in the illegal practice of discharging inadequately treated septic tank effluents directly

into surface-water drains or storm water sewers. The lack of space on many domestic and commercial properties does not permit the installation of satisfactory field tile disposal units. This condition also results in inadequately treated septic tank effluents being discharged directly into the surface-water sewers and drains.

One industry within the municipality, Clark Foods Limited, is identified as a potential source of industrial waste.

Garbage and refuse from the municipality is disposed of on the property of Mr. L. Halstead, Concession IV, Lot 11, Township of Colchester, South. At the time of inspection this operation was not considered to be a source of pollution.

WATER POLLUTION

As a measure in assessing the degree of pollution being discharged from the municipality into the Richmond Drain and the Cedar Creek watercourse, water samples were collected, where possible, from the flows in street sewers, and from local surface-water drains.

The sanitary chemical analyses and the bacteriological examination results of samples collected are listed in Table I.

The locations of sampling points are designated on the accompanying map by watercourse mileage distances from the mouth of Cedar Creek at Lake Erie.

INTERPRETATION OF LABORATORY ANALYSES

For convenience in the interpretation of laboratory analyses, the Ontario Water Resources Commission water quality objectives, for waters in storm sewer systems and other surface-water drains, are listed:

5-Day BOD (Biochemical Oxygen Demand)

- not greater than 15 parts per million (ppm)

Suspended Solids Content

- not greater than 15 parts per million (ppm)

Coliform Count (Membrane Filter)

- not greater than 2,400 per 100 millilitres (ML)

Anionic Detergent (as ABS)

- The presence of any level of anionic detergent indicates pollution from domestic sources.

SIGNIFICANCE OF LABORATORY ANALYSES

The sanitary chemical analyses and bacteriological examinations of all samples collected from the Harrow municipal storm sewers and drains, show results greatly in excess of the water quality objectives. The excessively high coliform counts, and the concentration of anionic detergent, indicate that sanitary sewage and other domestic wastes are probably the major sources of the pollution.

Attention is drawn to the excessive levels of pollution as indicated at the Queen Street North sewer discharge (CPF 12.40 W) and the two King Street West sewer discharges (CKH 12.85 W and CKH 12.84 W). These drains service the main

commercial sections of Harrow along with residential areas.

SUMMARY AND CONCLUSIONS

A water pollution survey was conducted in the Town of Harrow on July 6, 1965.

The visual observations and findings of the survey verify that polluting materials are being discharged into the Cedar Creek watercourse from the various drains throughout the municipality. The extremely high BOD, coliform and anionic detergent counts indicate that sanitary sewage and other domestic wastes are major sources of pollution.

These wastes are being discharged into the surface water drains from domestic and commercial properties which do not provide satisfactory private sewage treatment. The practice of discharging inadequately treated effluents from septic tanks or polluting materials from any source into a surface-water drain or watercourse constitutes a violation of Section 27, Subsection (1) of the Ontario Water Resources Commission Act which states:

"Every municipality or person that discharges or deposits or causes or permits the discharge or deposit of any material of any kind into or in any well, lake, river, pond, spring, stream, reservoir or other water or watercourse or on any shore or bank thereof or into or in any place that may impair the quality of the water of any well, lake, river, pond, spring, stream, reservoir or other water or watercourse is guilty of an offence and on summary

conviction is liable to a fine of not more than \$1,000 or to imprisonment for a term of not more than one year, or to both".

The Clark Foods Limited, the major industry in the municipality provides private treatment for its processing wastes. An inspection and report on the efficiency of the treatment system will be made later in the season when the plant is on a full operating schedule.

RECOMMENDATIONS

1. The Town of Harrow should institute a sewerage works programme which would entail the installation of sanitary sewers and the provision of an adequate means of sewage treatment.

2. In the event that the institution of such a programme is not feasible, it will then be necessary for the municipality to take measures to ensure that all private drains, which discharge inadequately treated wastes into any surface-water drain, storm sewer system, or watercourse, are immediately located and severed.

This action will then necessitate that each property owner provide a satisfactory and adequate system for the treatment of his own wastes.

All of which is respectfully submitted,

District Engineer

C. E. McIntyre
C.E. McIntyre, P.Eng.,

Approved by

J.R. Barr, Assistant Director.

/elb

Prepared by: J.K. Ferris,
Engineer's Assistant.

TABLE I

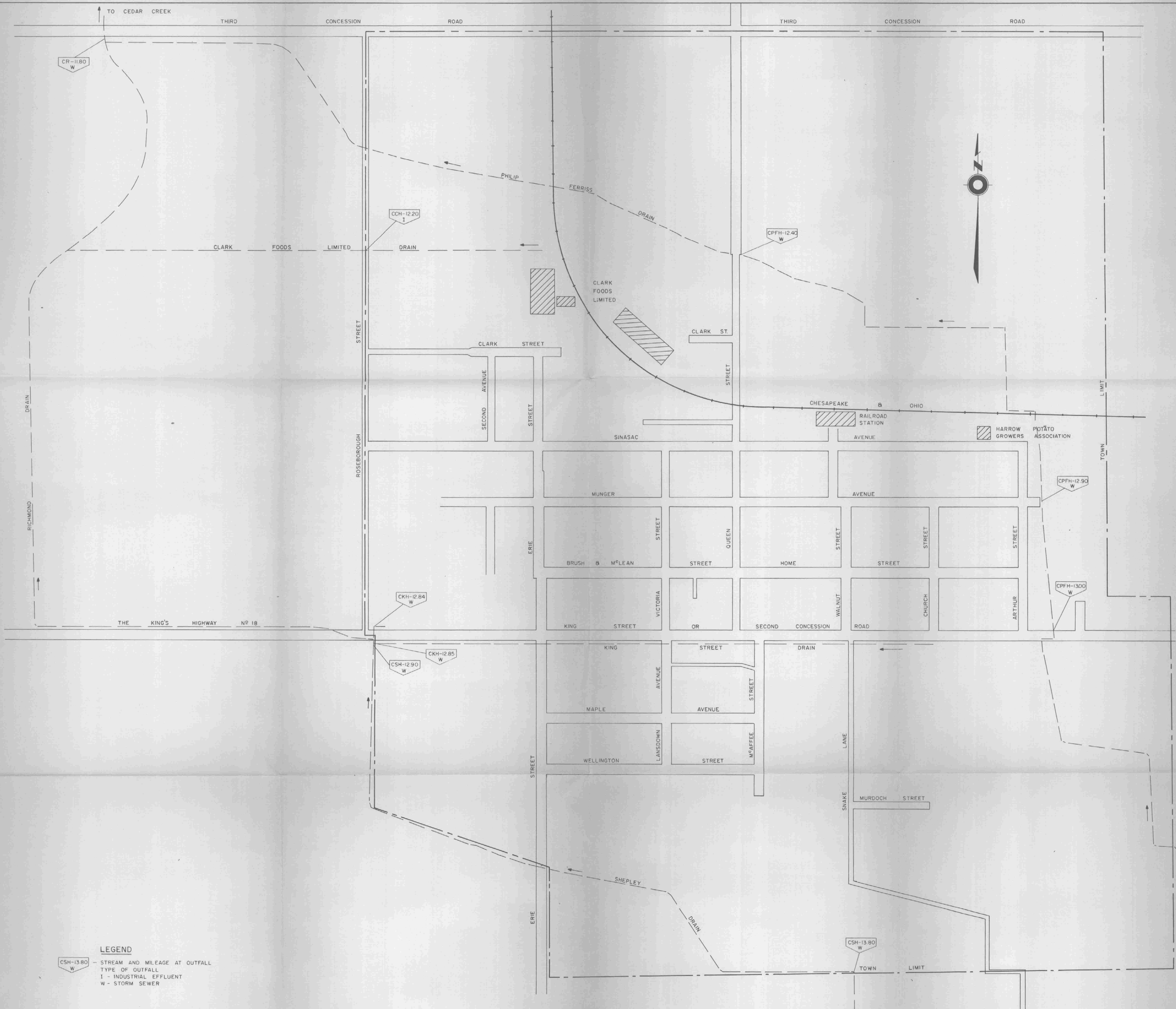
TOWN OF HARROW - WATER POLLUTION SURVEY

SURFACE-WATER DRAINS

<u>Mileage Designation</u>	<u>Location of Sampling Point</u>	<u>5-Day BOD (ppm)</u>	<u>Total (ppm)</u>	<u>Solids Susp. (ppm)</u>	<u>Diss. (ppm)</u>	<u>Anionic Detergents as ABS (ppm)</u>	<u>Coliforms per 100 ML Membrane Filter</u>
	<u>Philip Ferriss Drain</u>						
CPFH 13.00 W	At East King St.	8.0	806	25	781	1.4	129,000
CPFH 12.90 W	At Munger St. Outfall	11.4	670	7	663	2.0	9,900
CPFH 12.40 W	At North Queen St. Outfall.	96.0	886	274	612	8.2	150,000,000
	<u>King Street Drain</u>						
CKH 12.85 W	At Roseborough St.(south side)	48.0	352	31	321	3.0	10,300,000
CKH 12.84 W	At Roseborough St.(north side)	42.0	710	36	674	13.0	550,000,000
	<u>Shepley Drain</u>						
CSH 13.80 W	Upstream from Harrow.	4.2	680	46	634	0.3	9,000
CSH 12.90 W	Prior to junc- tion with King St.Drain.	38.2	664	174	490	11.2	10,000,000

TABLE I (CONT'D)

<u>Mileage Designation</u>	<u>Location of Sampling Point</u>	<u>5-Day BOD (ppm)</u>	<u>Total (ppm)</u>	<u>Solids Susp. (ppm)</u>	<u>Diss. (ppm)</u>	<u>Anionic Detergents as ABS (ppm)</u>	<u>Coliforms per 100 ML Membrane Filter</u>
	<u>Richmond Drain</u>						
CR 11.80 W	At 3rd Conc. downstream from Harrow.	35.0	618	14	604	2.5	100,000
	<u>Clark Foods Limited</u>						
CCH 12.20 I	At Roseborough Rd.	4.8	420	5	415	2.1	7,500



LEGEND
CSH-1380 W — STREAM AND MILEAGE AT OUTFALL
I — INDUSTRIAL EFFLUENT
W — STORM SEWER

ONTARIO WATER RESOURCES COMMISSION	
TOWN OF HARROW	
WATER POLLUTION SURVEY	
SCALE: 0 300 600 900 FEET	
DRAWN BY: W.R.E.	DATE: SEPTEMBER 1965
CHECKED BY:	DRAWING No: 65-124

[illegible]

Laboratory Library
125 Resources Rd.
Etobicoke, Ontario M9P 3V6
Canada